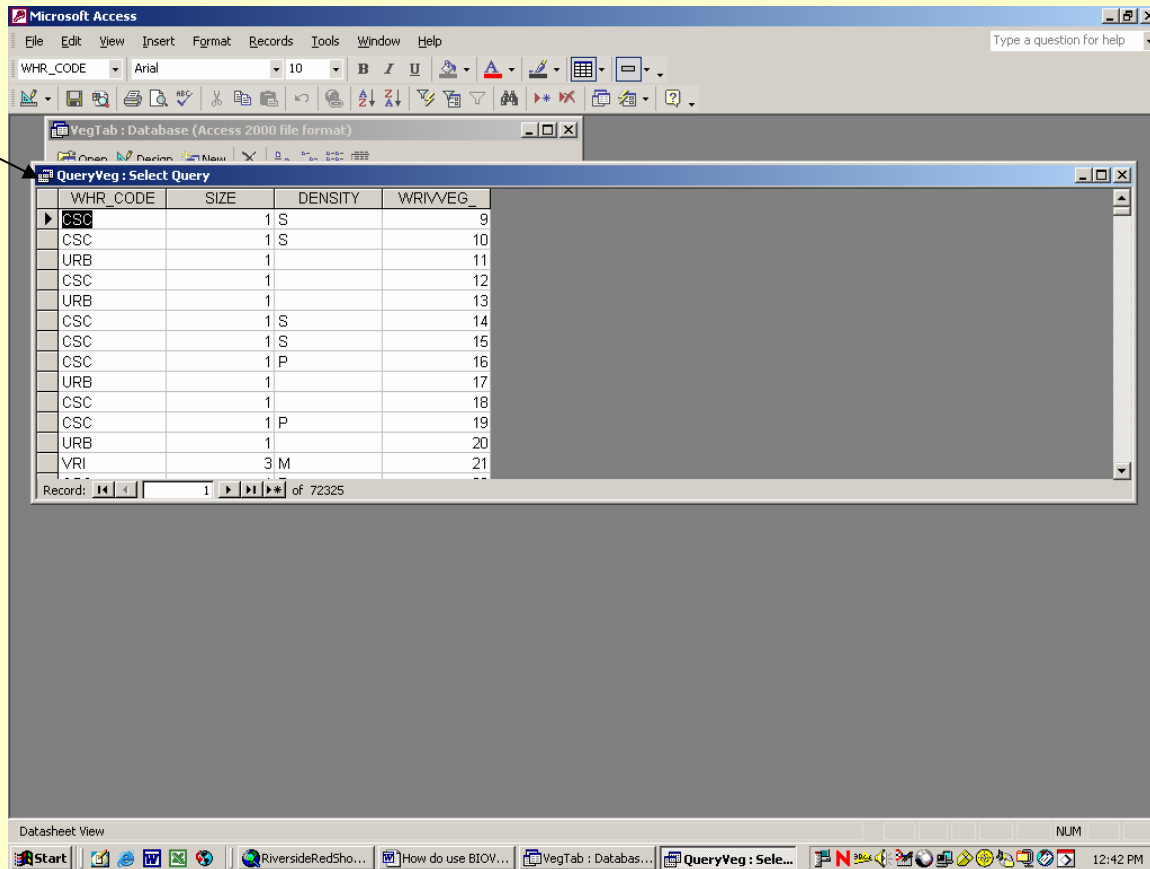


## How to use BIOVIEW with Large Databases:

Bioview has a limit of 30,000 records, so if a database contains more records than this, it needs to be processed in increments. Also, if a database contains more than 65,536 records the capacity of MS Excel is exceeded. The process for using MS Access to overcome these shortcomings is presented.

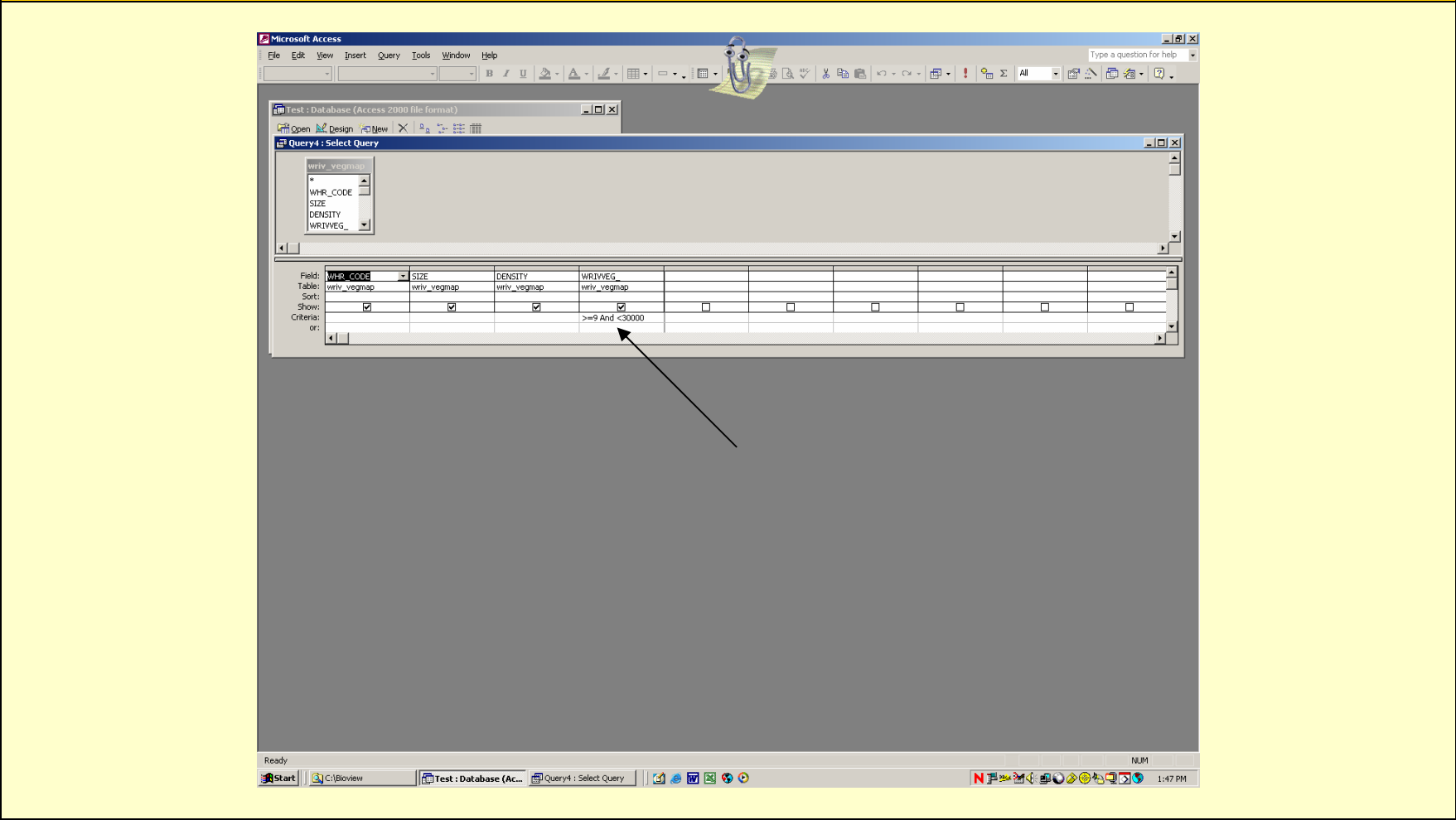
**In MS Access, organize your data as required for BIOVIEW: Habitat (3 letters), Size, Cover, and ID.**  
**In the example, “cover” is represented by “density”.**



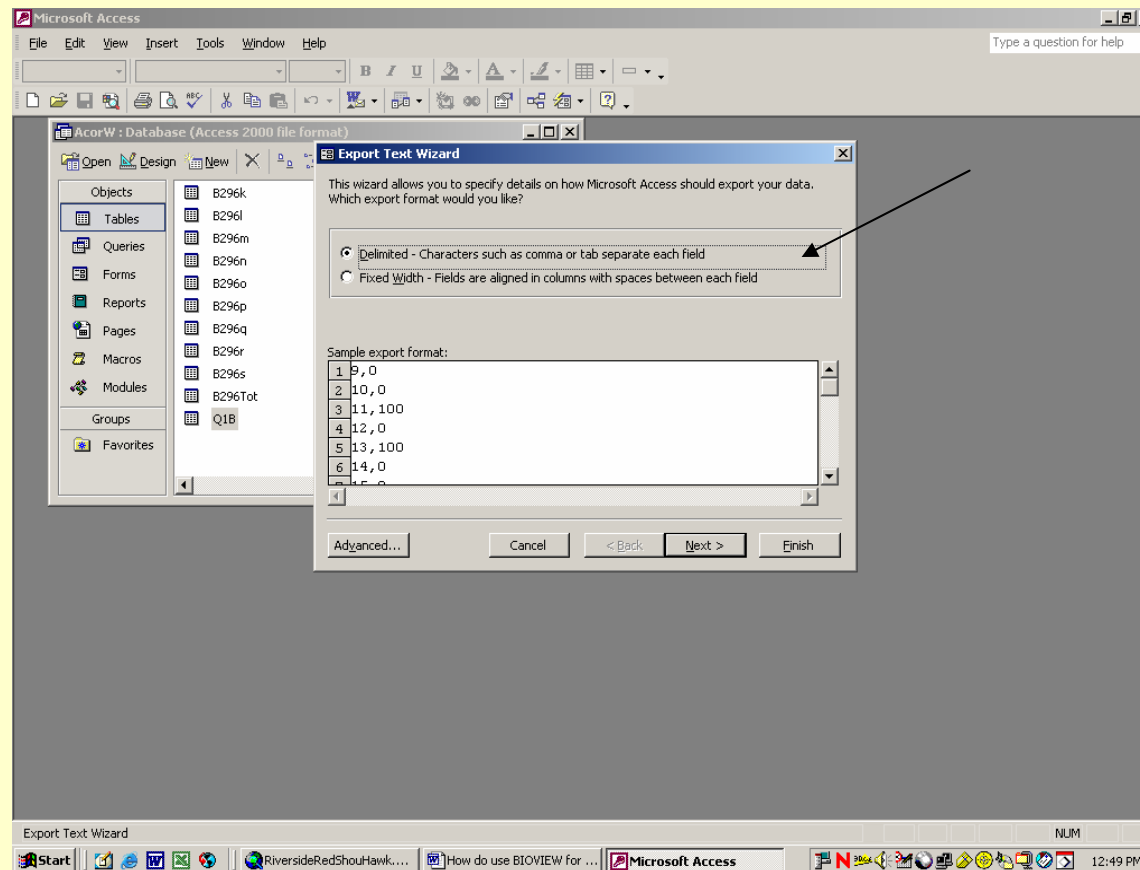
The screenshot shows the Microsoft Access interface. The main window displays a query named 'QueryVeg : Select Query' in Datasheet View. The query results are shown in a table with the following columns: WHR\_CODE, SIZE, DENSITY, and WRIVVEG\_. The data is organized by WHR\_CODE, with rows for CSC, URB, and VRI. The 'SIZE' column contains values like '1 S' or '3 M'. The 'DENSITY' column contains values like '9', '10', '11', etc. The 'WRIVVEG\_' column contains values like '9', '10', '11', etc. The status bar at the bottom indicates 'Record: 1 of 72325'.

WHR_CODE	SIZE	DENSITY	WRIVVEG_
CSC	1 S	9	9
CSC	1 S	10	10
URB	1	11	11
CSC	1	12	12
URB	1	13	13
CSC	1 S	14	14
CSC	1 S	15	15
CSC	1 P	16	16
URB	1	17	17
CSC	1	18	18
CSC	1 P	19	19
URB	1	20	20
VRI	3 M	21	21

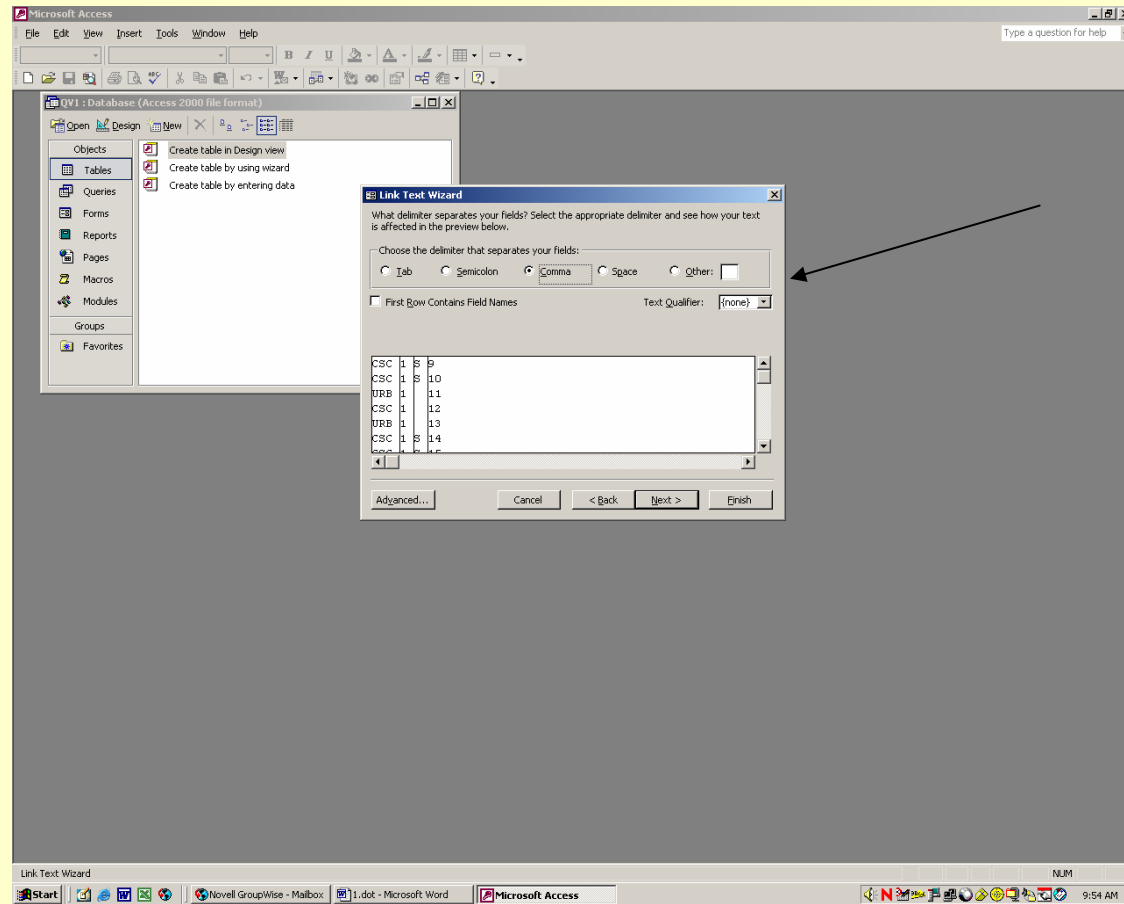
**In Query Design View, separate the data into different lists with portions of about 30,000 records each.**



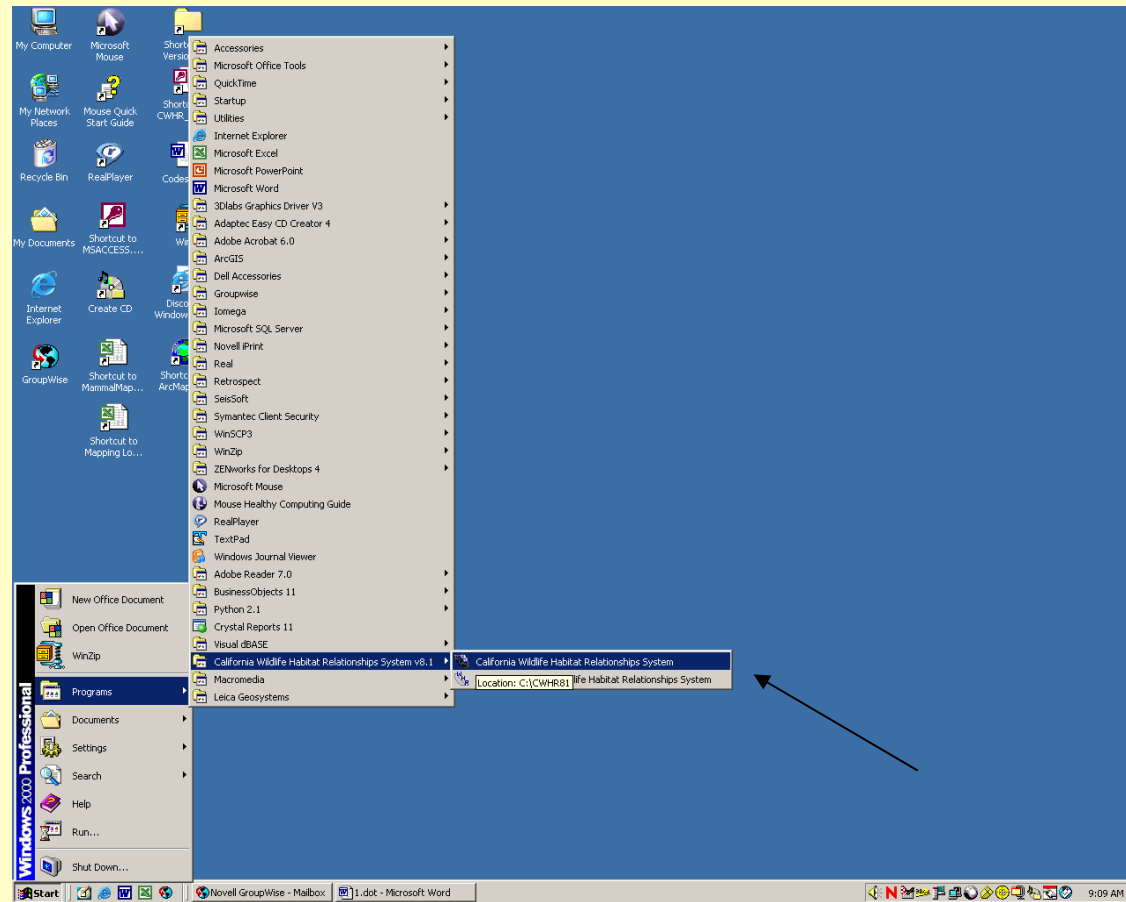
**Export the files to \*.csv in Access. Use a short name (< or = 8 characters). In the dialog box, choose Delimited as an export format.**



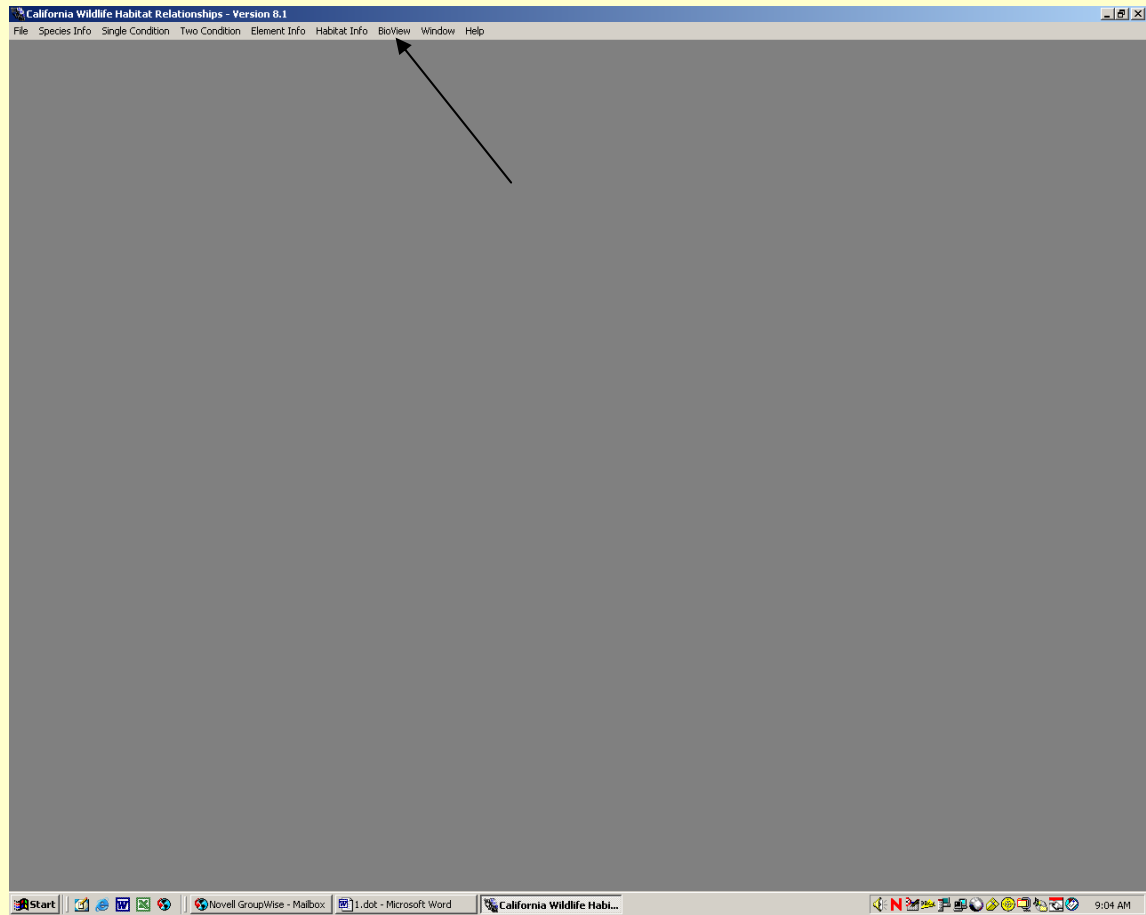
Choose “Comma” as the delimiter and {none} for Text Qualifier. Click “Next” and “Finish” buttons.



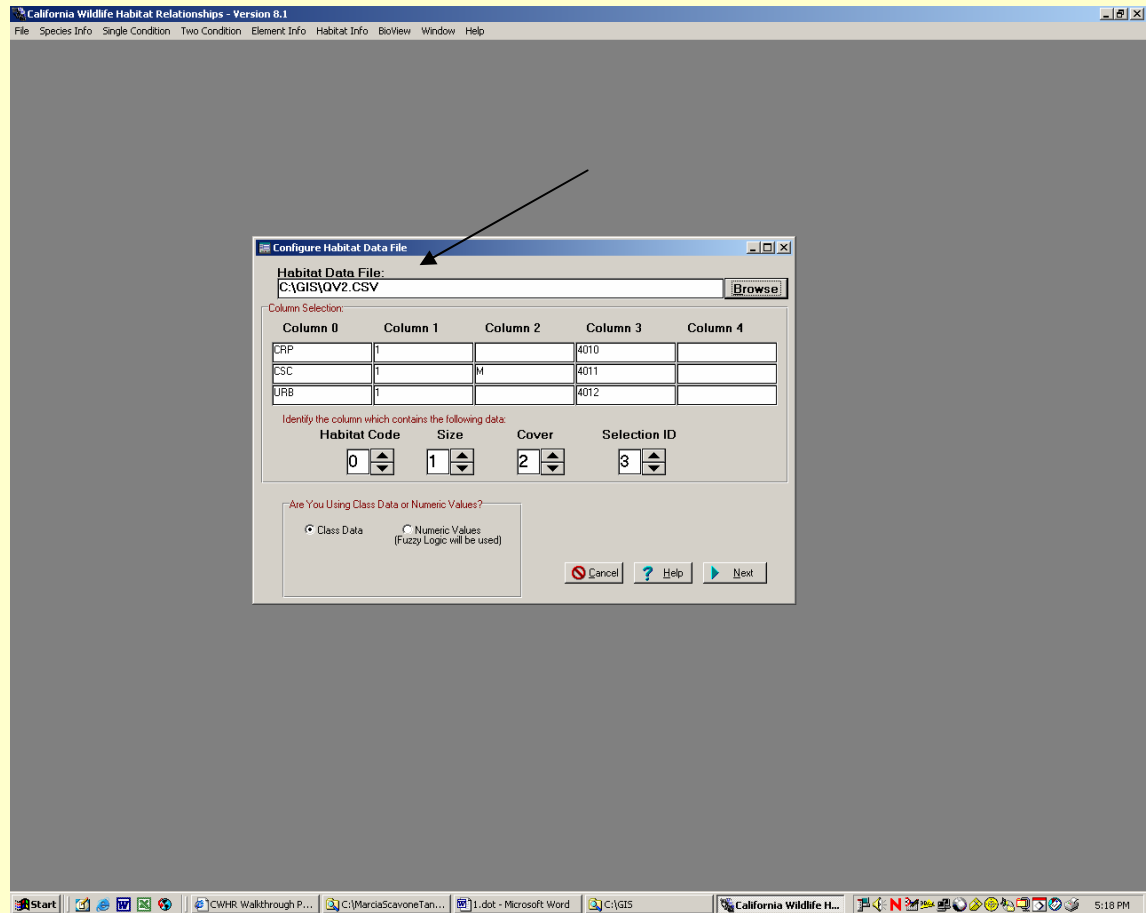
**Open the California Wildlife Habitat Relationships (CWHR) software.**



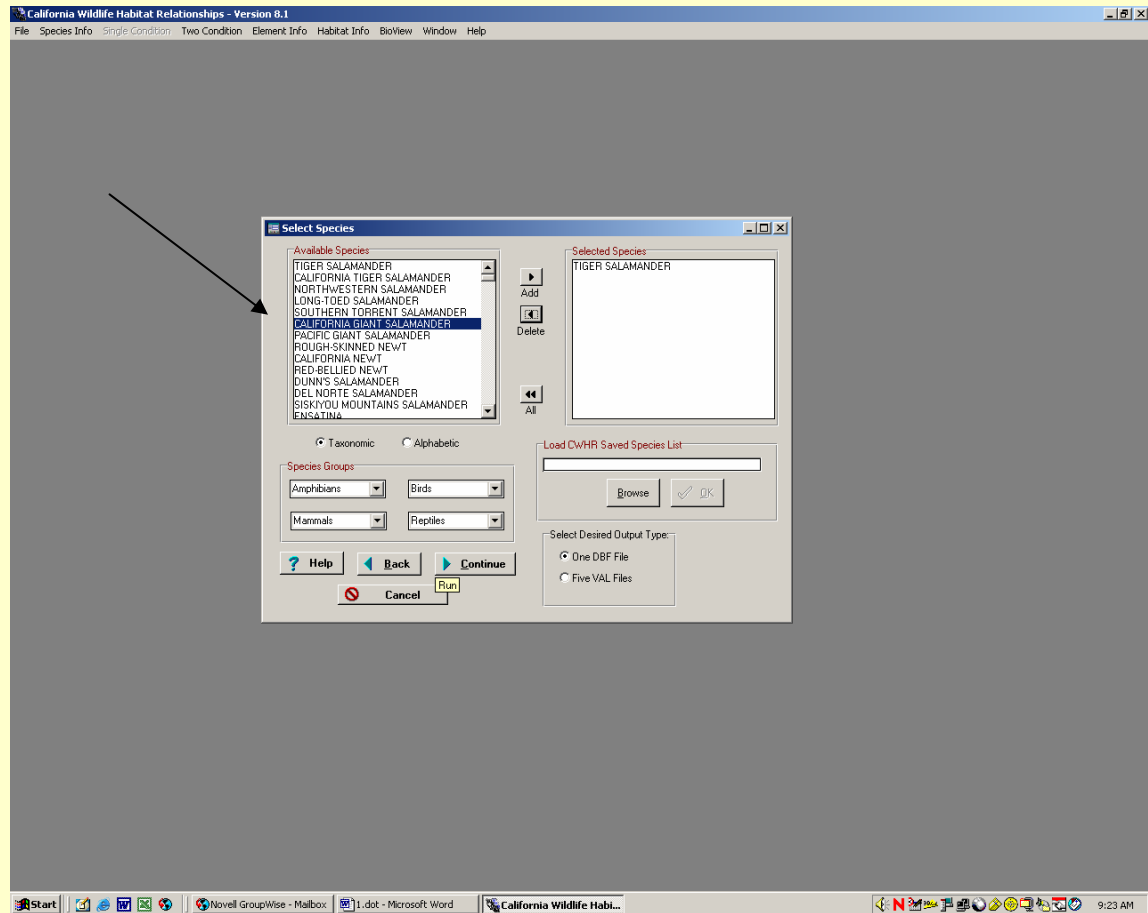
**Open BIOVIEW.**



Browse each one of the \*.csv files that you just created.

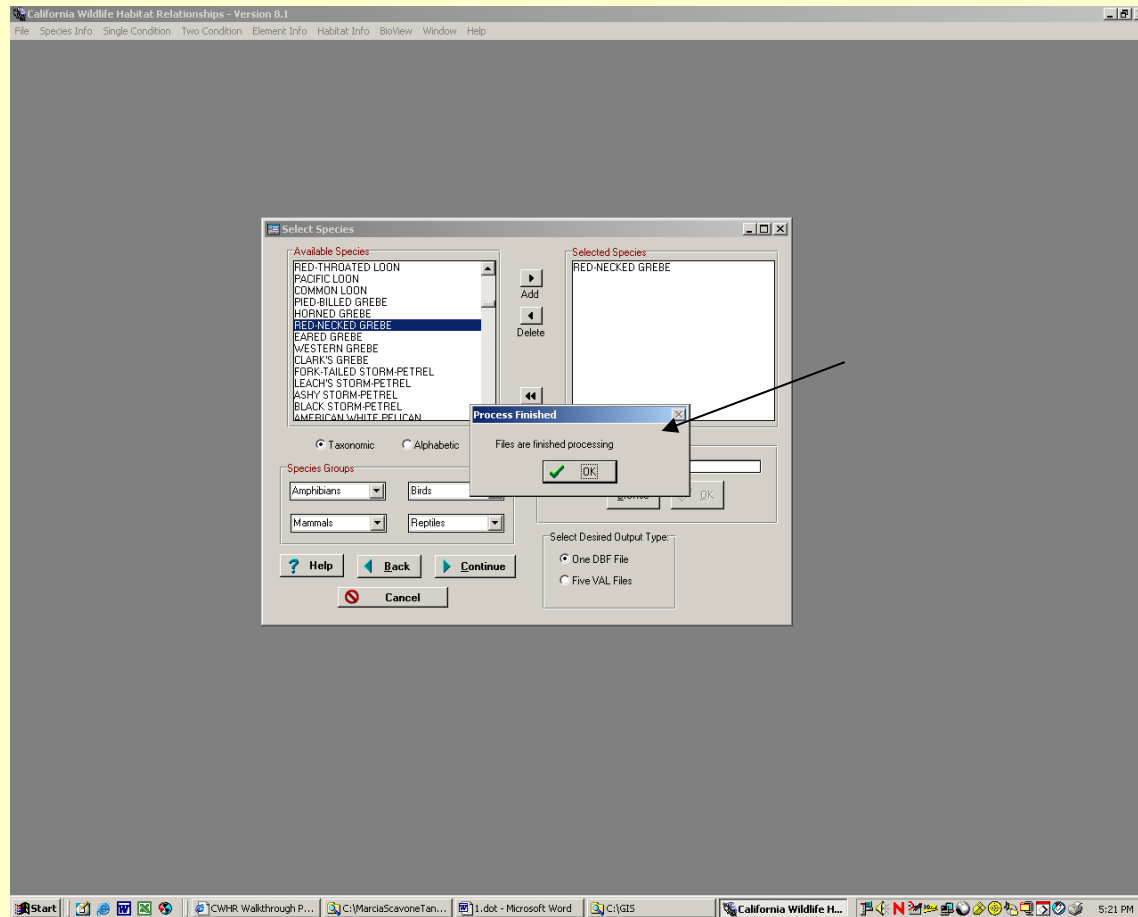


Select one or more species and click “Continue”.

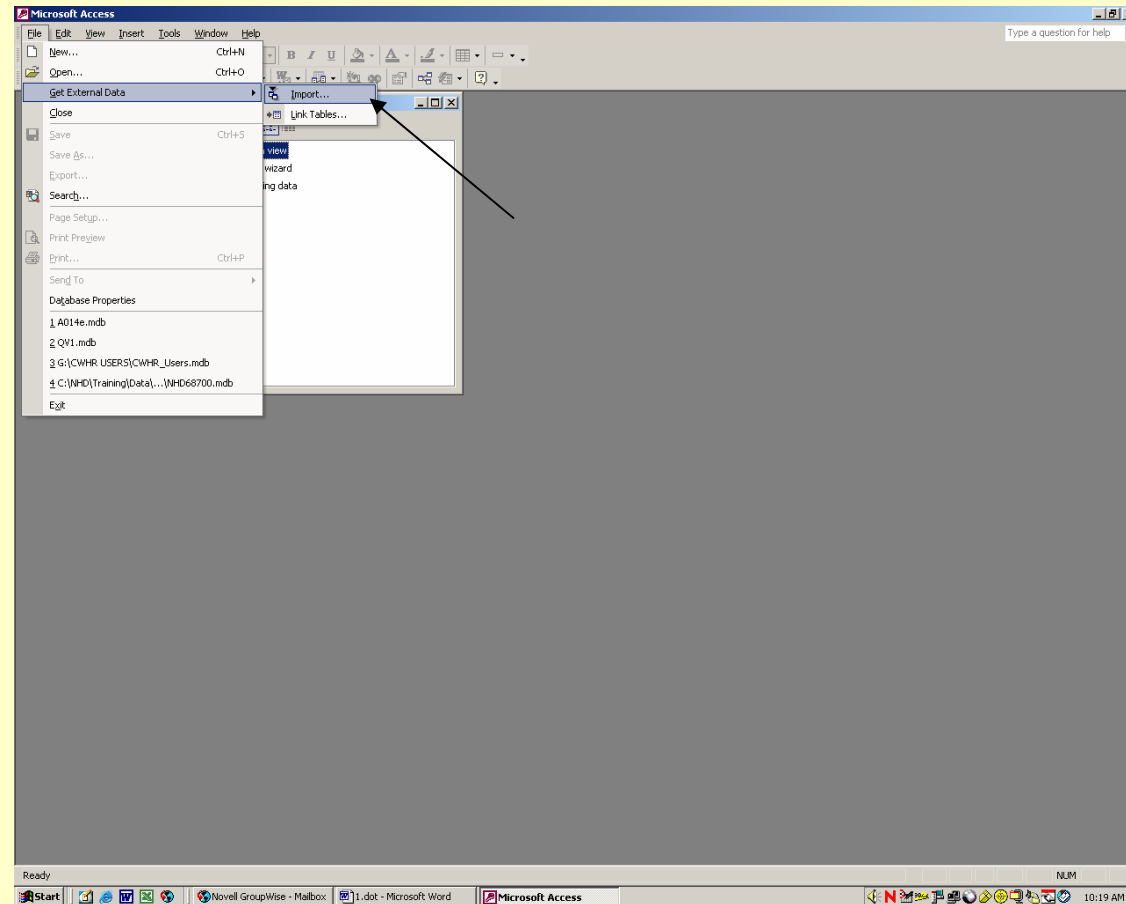




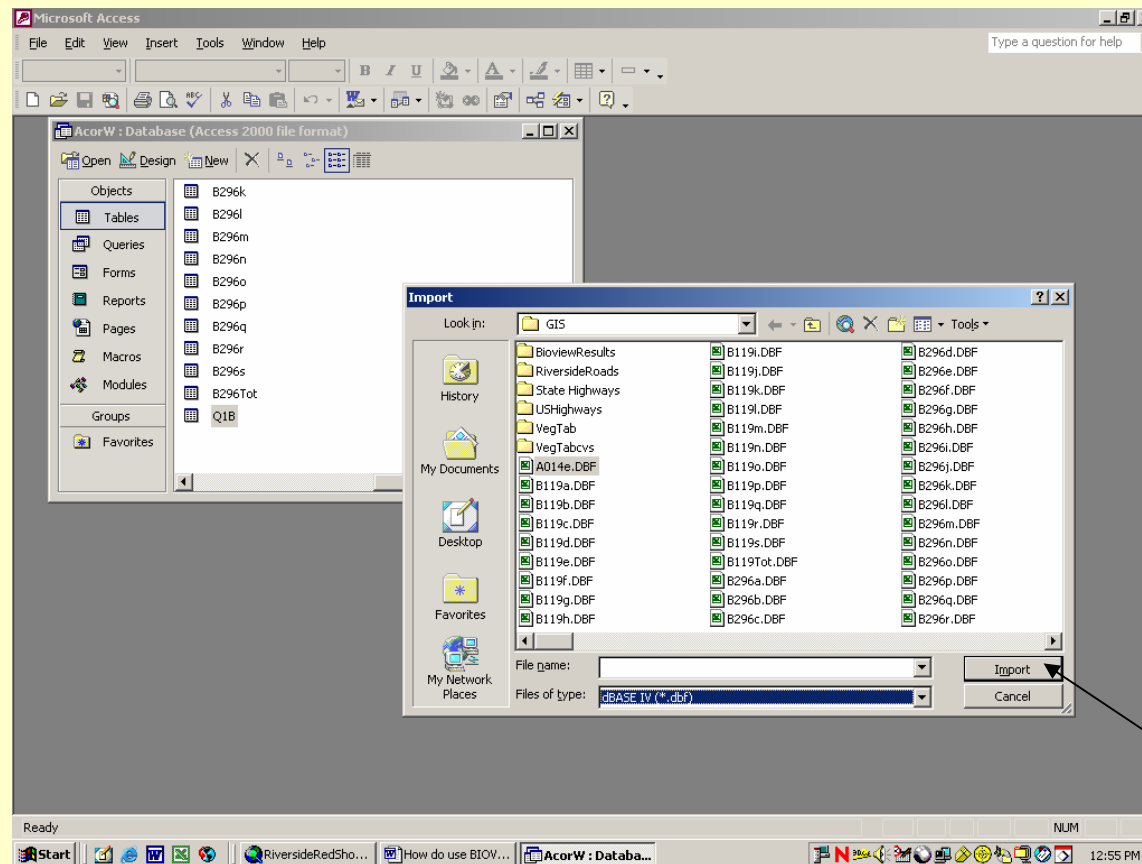
**When BIOVIEW is finished with a \*.csv file, close the CWHR software.**



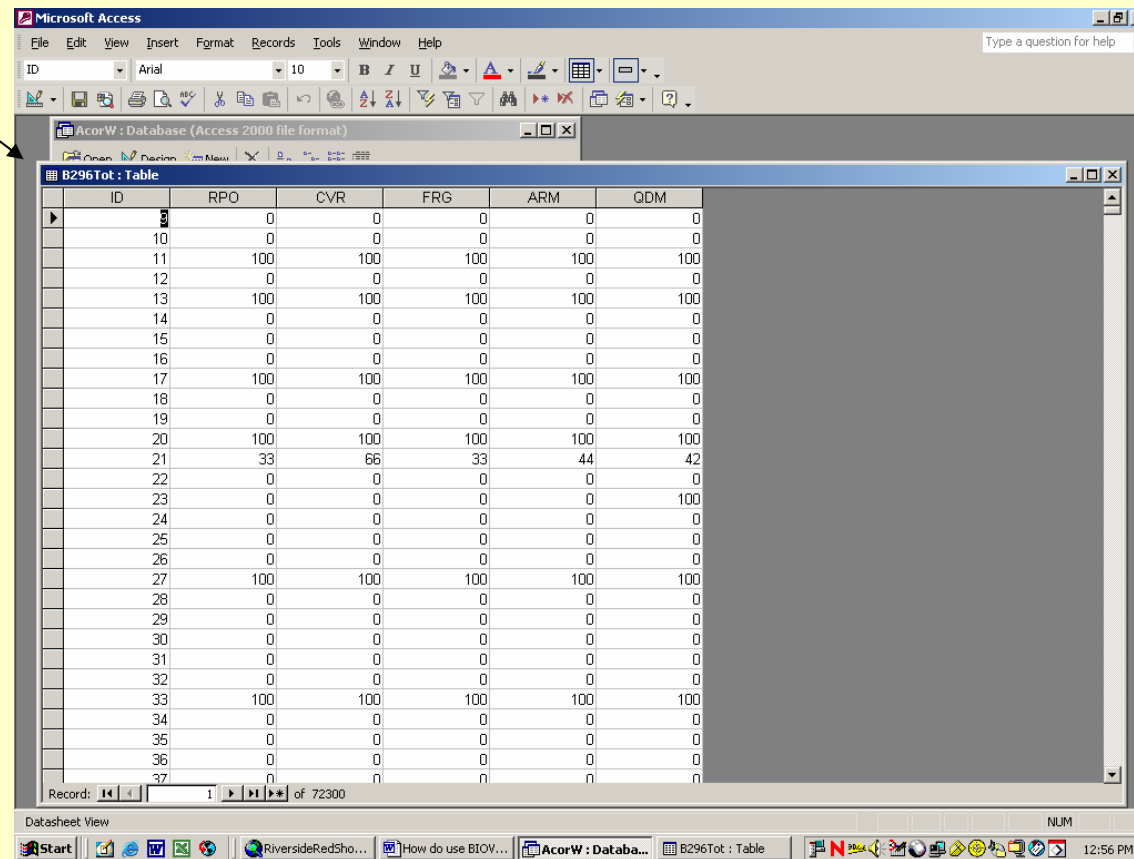
**Pull the resulting \*.dbf files, one for each species run in BIOVIEW, into Access. For each \*.dbf file, select “Get External Data”, then “Import”.**



**Repeat the process of running BIOVIEW on each of the sub-files that you imported from Access \*.csv. This process leaves you with several sub-files in \*.dbf for each species.**  
**Next, use Access again to import \*.dbf into \*.mdb.**



Join all of the previously separated files for a species into one \*.mdb file. The file below was named with the CWHR ID code for the species and Tot for total (B296Tot).

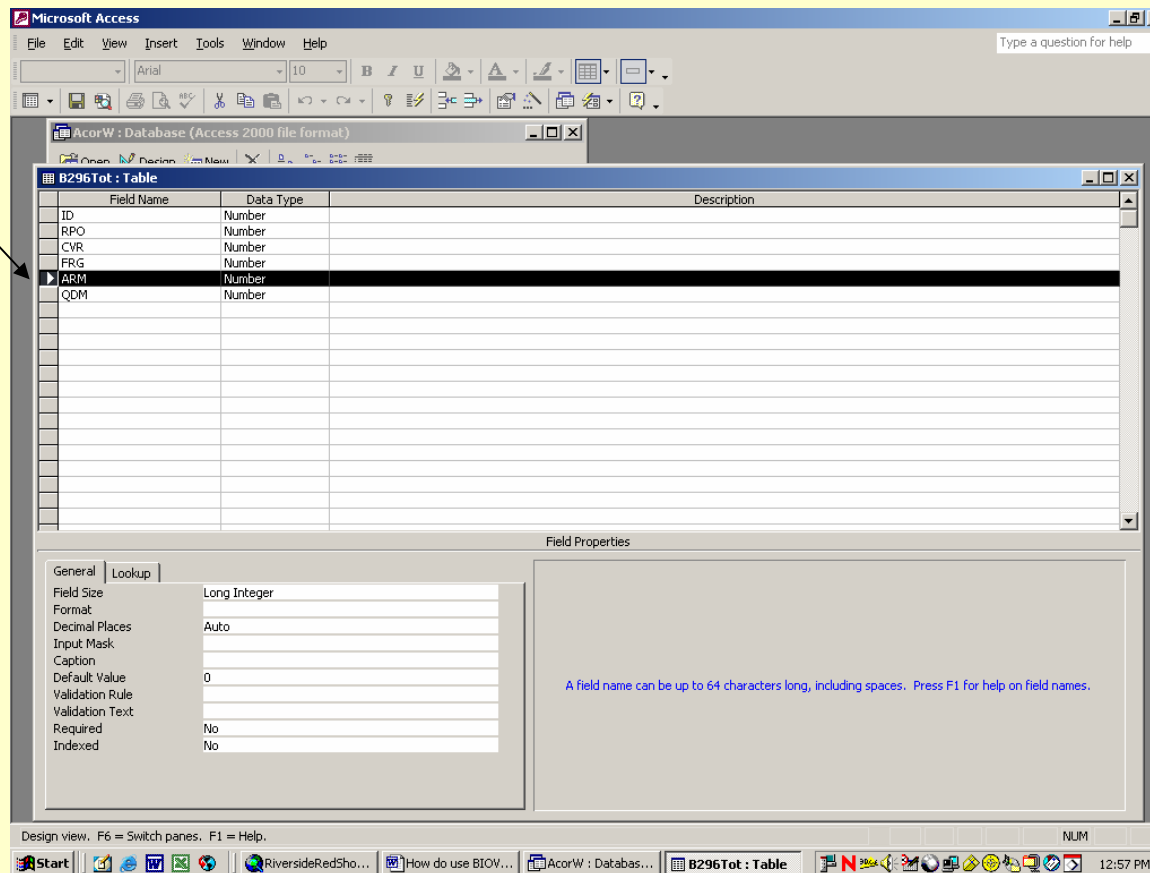


The screenshot shows the Microsoft Access application window. The title bar reads 'Microsoft Access'. The menu bar includes File, Edit, View, Insert, Format, Records, Tools, Window, and Help. The toolbar contains various icons for file operations and data manipulation. The main window displays a table named 'B296Tot : Table' in Datasheet View. The table has the following columns: ID, RPO, CVR, FRG, ARM, QDM, and NUM. The data is as follows:

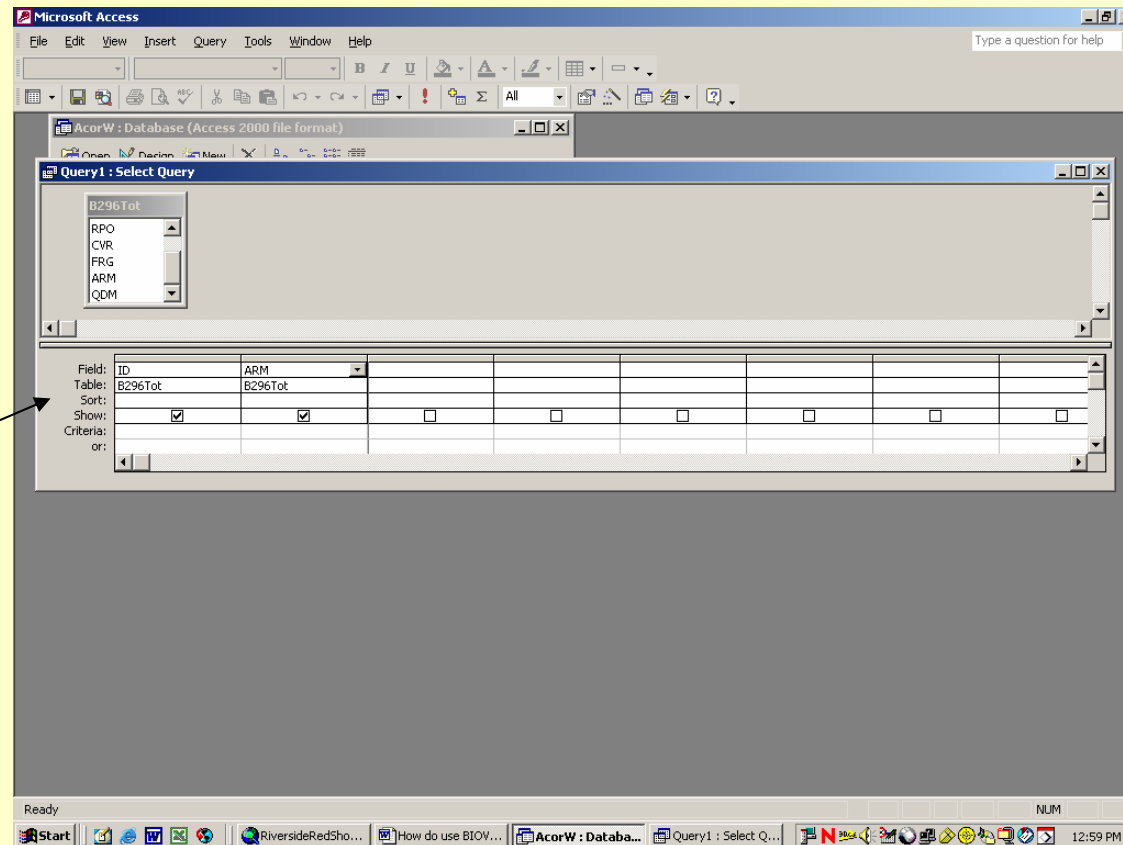
ID	RPO	CVR	FRG	ARM	QDM	NUM
9	0	0	0	0	0	
10	0	0	0	0	0	
11	100	100	100	100	100	
12	0	0	0	0	0	
13	100	100	100	100	100	
14	0	0	0	0	0	
15	0	0	0	0	0	
16	0	0	0	0	0	
17	100	100	100	100	100	
18	0	0	0	0	0	
19	0	0	0	0	0	
20	100	100	100	100	100	
21	33	66	33	44	42	
22	0	0	0	0	0	
23	0	0	0	0	100	
24	0	0	0	0	0	
25	0	0	0	0	0	
26	0	0	0	0	0	
27	100	100	100	100	100	
28	0	0	0	0	0	
29	0	0	0	0	0	
30	0	0	0	0	0	
31	0	0	0	0	0	
32	0	0	0	0	0	
33	100	100	100	100	100	
34	0	0	0	0	0	
35	0	0	0	0	0	
36	0	0	0	0	0	
37	0	0	0	0	0	

The status bar at the bottom indicates 'Record: 1 of 72300'. The taskbar at the very bottom shows the Start button and several open applications: RiversideRedSho..., How do use BIOV..., AcorW : Databa..., and B296Tot : Table. The system clock shows 12:56 PM.

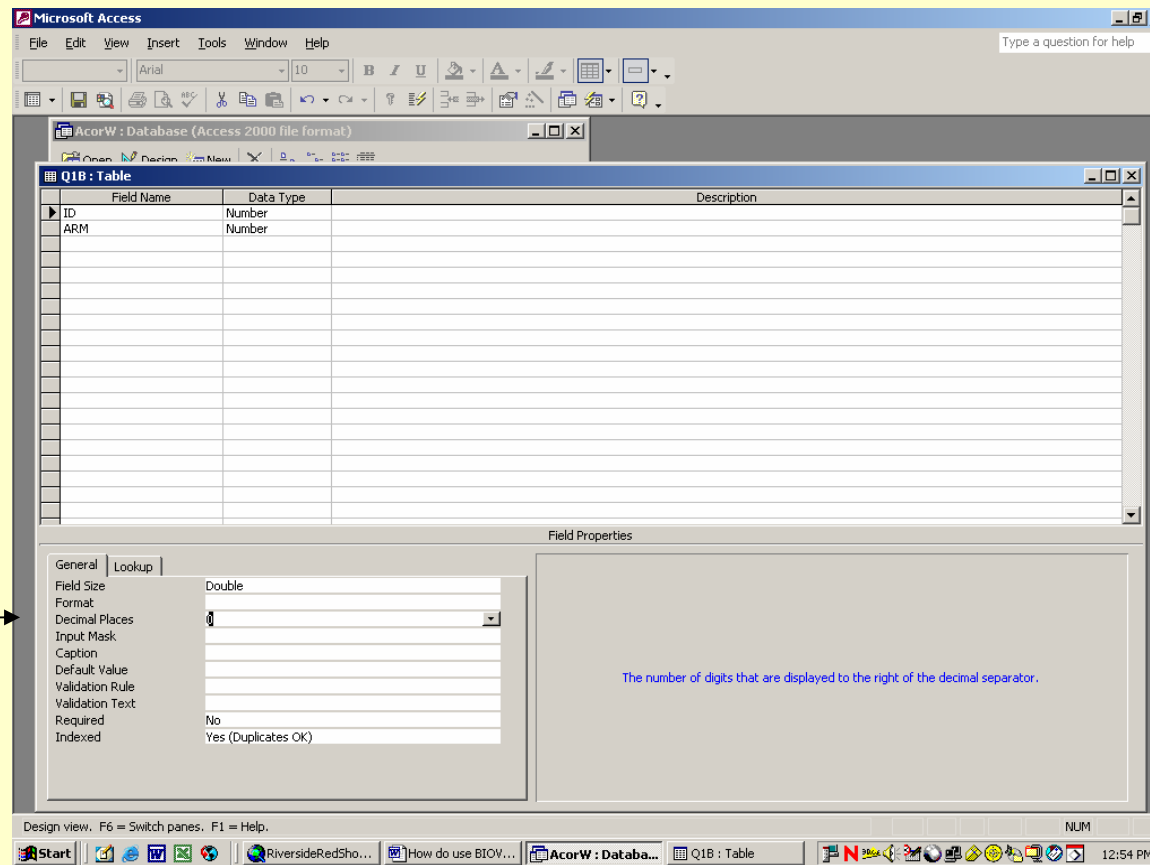
**Change the data type in any field you will use in a final GIS analysis (e.g. “ARM” for arithmetic mean) from text to number in Design View.**



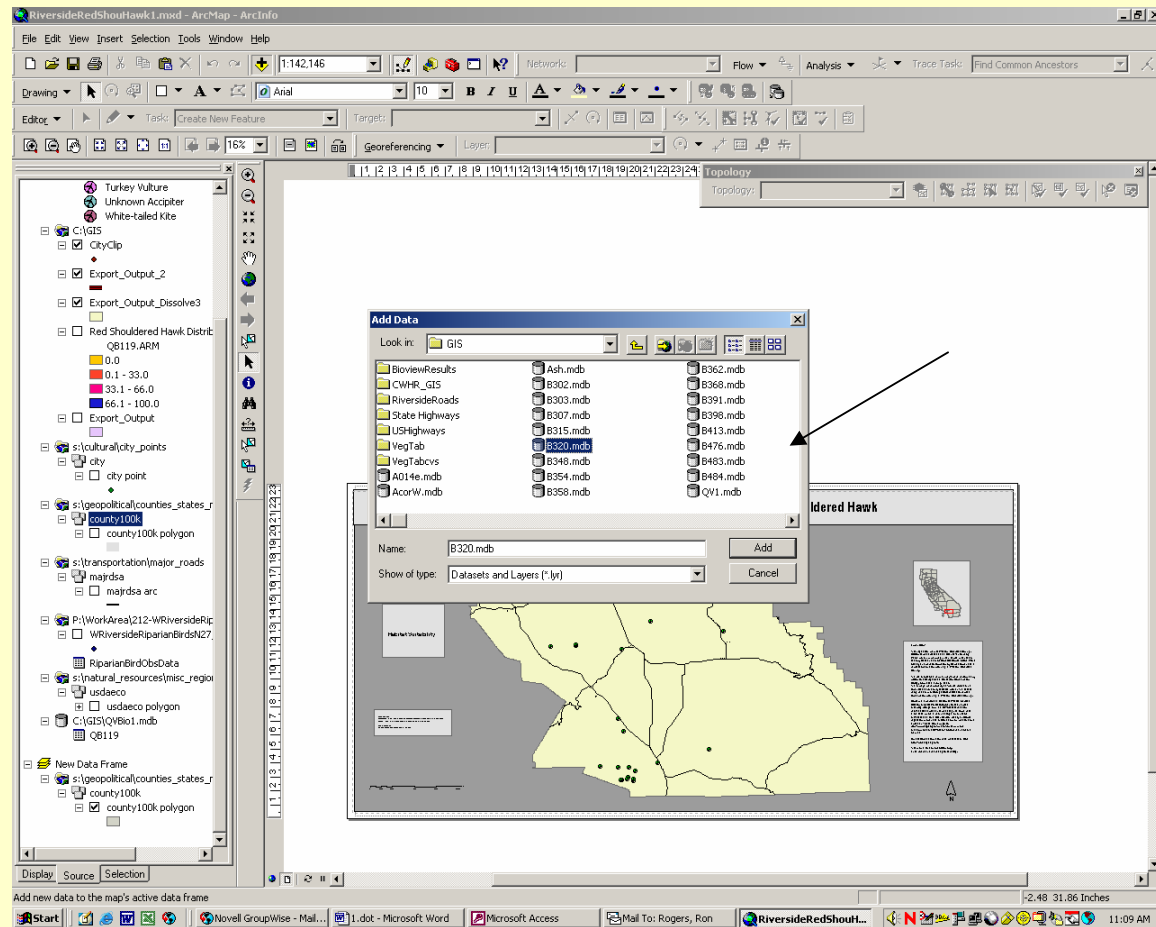
**To prepare each resulting file for use in a GIS analysis, query using only the “ID” and a minimum of other selected fields. It helps to keep the files small.**



**Be certain Numeric fields have “0” decimals. Close the table and close Access.**

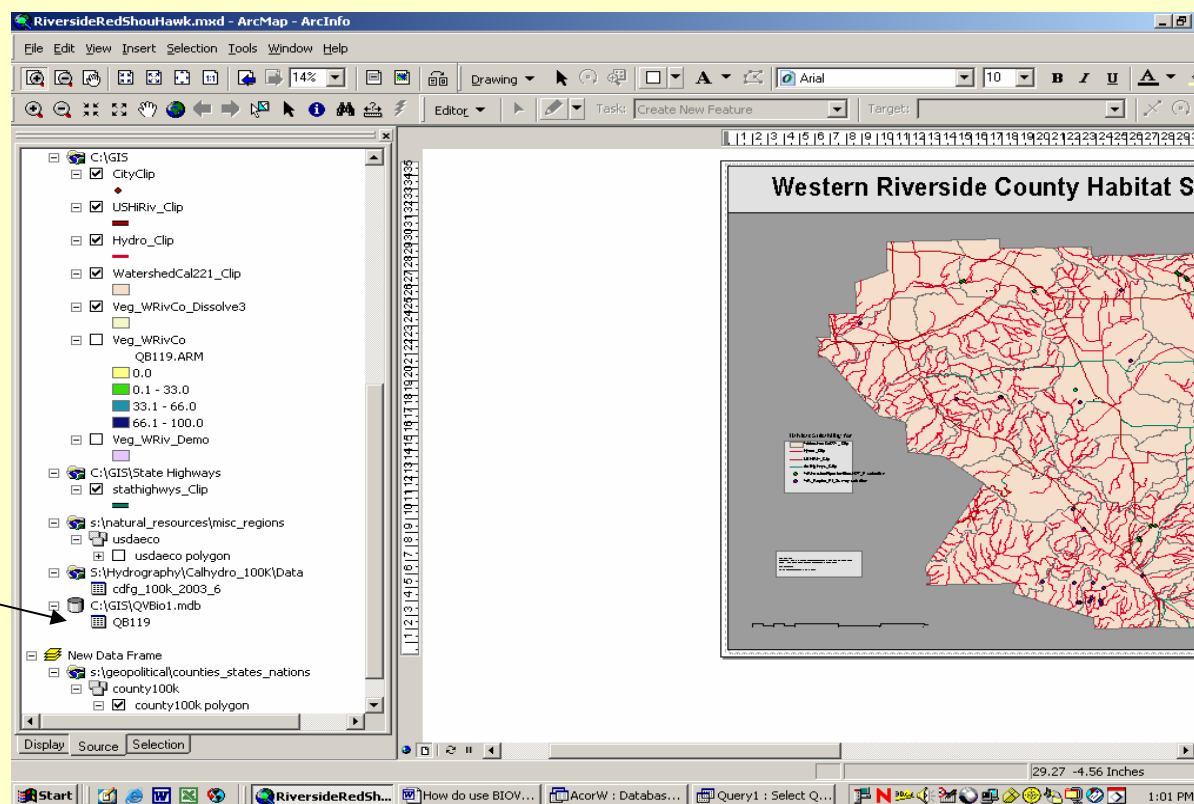


In GIS, add the .mdb layer.





**The database will be in your Table of Contents. Join or relate to a spatial layer.**



**Marcia Scavone-Tansey**  
**Biogeographic Data Branch, California Department of Fish and Game**  
**January, 2007**